

1967

NARRATIVE REPORT

BENSON WETLAND MANAGEMENT DISTRICT

BENSON, MINNESOTA

CALENDAR YEAR 1967

PERMANENT PERSONNEL

James J. Hubert, Project Leader (GS-11)	1/1/67-12/31/67
Jack C. Wemble, Assistant Wetland Manager (GS-9)	1/1/67-12/31/67
Betty L. Dahl, Clerk (GS-3)	1/1/67-12/31/67
Richard W. Metzko, Maintenanceman (WB-5)	8/27/67-12/31/67
Roger H. Nelson, Maintenanceman (WB-5)	8/27/67-12/31/67

TEMPORARY PERSONNEL

William G. Berns, Wildlife Biological Technician *	7/9/67-7/28/67
Richard W. Metzko, Laborer **	1/1/67-8/26/67
Roger H. Nelson, Laborer **	1/1/67-8/26/67
Earl W. Orr, Laborer	8/7/67-10/31/67
John E. Schliep, Laborer	5/22/67-12/2/67

*Employment terminated 7/28/67, inducted into Armed Services

**Reclassified, Career-conditional appointment 8/27/67

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ANNUAL NARRATIVE REPORT
BENSON WETLAND MANAGEMENT DISTRICT

JANUARY - DECEMBER, 1967

I. GENERAL

A. Description of the Area

The Benson Wetland Management District Office located in Benson, Minnesota was established in October 1964 to serve an area of eleven counties of West-central and South-central Minnesota. Included in the District are the counties of Big Stone, Cottonwood, Jackson, Kandiyohi, Lac qui Parle, Pope, Stearns, Stevens, Swift, Traverse and Yellow Medicine. The map which follows reflects the extent and location of the Wetland District in relation to the State.

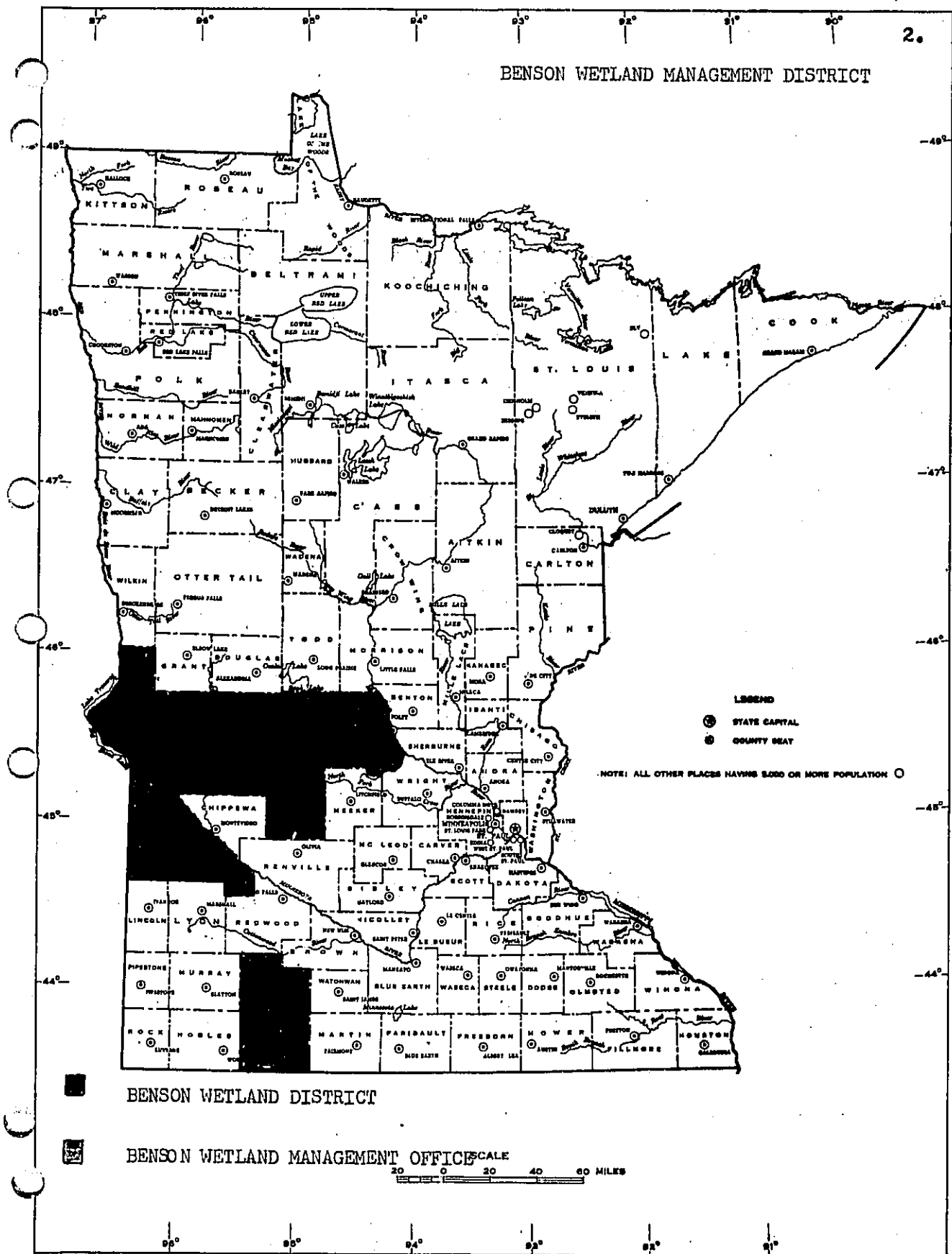
The area lies on the eastern margin of both the Great Plains and the duck factory region of the upper midwest. The topography varies from rolling grassland to flat agricultural type land. The transition zone between plains and forest is locally evident.

B. Status of the Acquisition Program

1. Fee Title Program

The Benson Area Acquisition Office, recently re-named Benson Wetland Office, anticipates very little change in their previously-stated goal for acquisition. They are still hopeful that 364 management units in the eleven-county district will be acquired in fee title by January, 1971. However, tentative plans to transfer about 2,000 goal-acres to Fergus Falls, Minnesota Wetland Office would make a slight change in the originally set goal acreage of 59,037. There are also indications that some shifts in acreage goals between counties might evolve.

The big stumbling block which was plaguing the small wetlands program was the expiration date of June 30, 1968 as set forth in the Wetlands Loan Act of 1961. This would have terminated the program prior to reaching previously stated goals. This hurdle was removed when the President signed into law the Wetlands Program Extension Bill (S.1078) on December 16, 1967. S.1078 will extend provisions of the Wetland Loan Act for an additional eight years.



Present trends indicate a decrease in the number of new management units, individual tracts and total acres being acquired. This decrease can be contributed to the fact that remaining wetlands under consideration are the more difficult ones to acquire. Also, the need for rounding out units has become more evident. Indicative of this decline is the fact that 500 wetland acres per month were acquired in 1966, while only 395 acres per month were acquired in 1967. New management units created have also decreased with records showing 46 new units in 1966 while only 30 new units during 1967.

Table I, "Acquisition Status" below reflects the status of the acquisition program through December 31, 1967. The option date of the purchase agreement was used as the breaking-point for preparing Table I.

TABLE I ACQUISITION STATUS, DECEMBER, 1967						
County	Fee Title		No.	Easements		Total
	No.	Acres		Wetland	Acres	
	Units	Acres	Easements	Acres	Acres	
Big Stone	46	6,600.15	99	3,690.00		13,773.43
Cottonwood	5	638.45		No easements being taken		
Jackson	10	1,352.17		No easements being taken		
Kandiyohi	33	5,223.86	82	2,792.00		9,507.62
Lac qui Parle	9	1,231.23	2	141.00		240.00
Pope	35	5,672.42	116	5,060.00		19,290.98
Stearns	12	1,966.69	5	257.00		876.32
Stevens	29	3,599.33	10	237.00		890.99
Swift	17	3,020.80	11	368.00		1,271.52
Traverse	7	1,669.62	19	965.00		3,021.38
Yellow Medicine	2	70.00		No easements being taken		
Totals	205	31,044.72	344	13,510.00		48,872.24

2. Easement Program

A total of 62 new easements were acquired in 1967. Although the easement program is still progressing slowly, there were more easements secured last year than in previous years. Trends indicate that the easement program will continue to increase as the fee title program decreases. It is the intent of the Acquisition Office to acquire key wetlands through fee title, and then to secure easements on the surrounding areas.

At this time easement goals are not reliable enough to make a correlation with actual acquired acres presented in Table I.

C. Weather Conditions

TABLE II

1967 WEATHER DATA

Precipitation

Month	Willmar	Morris	Benson	Canby	Windom	Average
January	1.92"	2.04"	2.21"	1.03"	.98"	1.64"
February	1.73	1.10	1.53	1.63	.85	1.37
March	.38	.15	.32	.30	.41	.31
April	1.51	2.33	2.11	2.14	4.47	2.51
May	.70	.52	1.17	.95	.32	.73
June	8.83	5.09	6.15	5.85	8.82	6.95
July	2.33	1.38	1.11	1.65	2.35	1.76
August	3.87	1.58	1.78	.50	2.52	2.05
September	1.03	.59	3.59	.49	.44	1.23
October	1.01	1.02	1.21	.64	1.30	1.04
November	.04	.07	.10	.22	.21	.15
December	1.54	.92	1.06	.64	.37	.91

ANNUAL TOTAL 24.89" : 16.79" : 22.34" : 16.04" : 23.04" : 20.65"

ANNUAL NORM 24.47" : 22.58" : *

*Normals have not yet been established.

Temperature

Month	Willmar	Morris	Benson	Canby	Windom
	Max : Min	Max : Min	Max : Min	Max : Min	Max : Min
January	38 : -29	37 : -31	37 : -31	49 : -18	42 : -22
February	41 : -32	43 : -27	46 : -28	50 : -27	47 : -18
March	72 : -18	77 : -16	78 : -17	80 : -10	78 : -10
April	69 : 21	71 : 18	72 : 20	75 : 17	82 : 20
May	83 : 19	82 : 21	85 : 20	97 : 18	98 : 20
June	88 : 46	87 : 46	90 : 47	95 : 38	92 : 43
July	88 : 43	94 : 41	95 : 42	97 : 38	97 : 42
August	88 : 45	91 : 42	92 : 42	96 : 40	89 : 40
September	84 : 32	86 : 29	85 : 30	88 : 31	89 : 28
October	85 : 14	83 : 12	83 : 14	87 : 12	85 : 13
November	64 : 0	61 : -2	73 : -1	66 : 0	68 : 0
December	46 : -23	44 : -27	46 : -26	52 : -26	50 : -22
EXTREMES	93 : -32	94 : -31	95 : -31	97 : -27	98 : -22

The last half of the 1966-1967 winter was a period of extremes. January, February and March brought below normal temperatures, while only the first two months received above-normal precipitation. The lowest temperature in several years, -31 degrees, was recorded in portions of the District during January. Several severe winter storms, heavy snow accompanied by high winds, evolved during January and February. As much as 88 inches of snow had been received over parts of the area by the end of the winter.

Moderating temperatures during April gave hope for an early spring, but to everyone's dismay, cold conditions prevailed throughout May. The persistence of low temperatures resulted in a late spring thaw. Although the major portion of the snow pack had disappeared by mid-April, ice still existed into the second week of May. Very little precipitation occurred during May, but carry-over from melted snow compensated for this. June was a record-setting month with an over-abundance of precipitation and seasonably cool temperatures. An average of 6.95 inches of precipitation was recorded for the month with some areas in the district recording 14 continuous days of rainfall. It is very unusual that the highest temperatures recorded over the District for the year occurred in Canby and Windom during the month of May.

The summer season brought unseasonably cool weather, a relief for sure from the extremely hot 1966 summer. Nowhere within the District did temperatures climb above 97 degrees during July and August. Recordings of below normal precipitation were noted throughout the summer. A few storms during July and August spawned hail and tornadoes over portions of the area, but very little rainfall. Extensive hail damage was received in areas, and several tornadoes were observed within the District during July. On one occasion the managers observed the makings of five tornadoes within one hour in Big Stone County. Fortunately, none of these twisters materialized.

Mild days and very cool nights was the routine throughout September and October. The first freezing temperatures were reported during the last week of September, followed by a short warming spell. Complete freeze-up of all available water did not occur until the third week of October. Precipitation was below normal for the entire fall season. Near drought conditions were in existence by this time. One heavy rain occurred on September 19th, but it was not prolonged enough to give much relief from the near-drought conditions.

Temperatures for November and December were mild with little variation from normal. The lack of measurable precipitation persisted until later in December. The year 1967 has been

tagged as a year of unusual weather, as reflected in the preceding table, but the finale did not arrive until the third week of December. A generous amount of precipitation was received in the form of rain and sleet over the entire District. It immediately froze on the ground to solid sheets of ice in excess of one inch thick in some locations. The year ended with very little snow cover, but an abundance of ice which will undoubtedly last until spring.

D. History of Past Use

The region is primarily agricultural with corn and beans as prevailing crops. Nearly all land regardless of capability has been tilled at one time. All types of erosion are evident as a result.

The terrific demand for farmland in the 1940's and 1950's caused many thousands of wetlands to be destroyed in the name of conservation. Greater emphasis on true conservation in recent years has resulted in at least a beginning to better land use.

The wetland management units are beginning to contribute to the area economy. Although the degree of economic relation may be small, the grazing units and small farmland tracts will aid the surrounding communities.

E. Habitat Conditions

1. Water

Water conditions throughout the District for 1967 were unique in that several erratic changes were shown. The year began with water-a-plenty and ended in a near-droughty state. Total precipitation recorded for the year fell as far below the annual average as the total precipitation for 1966 rose above.

The year began with near-normal water levels coupled with an above-normal snow pack. This paved the way for an abundance of water in 1967. Periodic thaws during the latter part of March and first half of April melted most of the snow cover and resulted in a gradual spring runoff which peaked during the second week of April. Water levels remained near normal through May even though little rainfall was received. Type I peripheral marshes carried an adequate supply of water throughout the spring.

Marshes of all types were rejuvenated in June, a month when an extremely large amount of precipitation was received. Most marshes were brimful and farm operations were temporarily halted as a result of excessive moisture in fields.

Early summer marked the beginning of a period when precipitation was lacking. This carried through to the end of 1967. Water levels began receding in July. By the close of July all Type I and II and some Type III potholes were dry, although the majority of brood potholes remained in good shape. During August the watertable continued dropping until all Type III marshes were dry. Water levels in some Type IV marshes showed signs of suffering by September. Heavy rainfall during the third week of September was not prolonged enough to contribute much runoff to the already dry Type III and IV marshes. High, persistent winds through most of the spring, summer and fall months increased evaporation even though temperatures remained mild.

As winter approached, near-drought conditions existed over the District. Very little precipitation in the form of snow was received before the year closed. The outlook for adequate water levels next spring is very discouraging at this time.

During the fall of 1967, 147 ditch plugs were constructed around the District in an effort to restore many marshes and create a few new ones. When adequate precipitation is received it will be interesting to observe the water-retention capabilities of these marshes. This development should also improve water quality for the future on marshes involved.

2. Food and Cover

Heavy accumulations of snow and several storms of blizzard-intensity during the last phase of the 1966-1967 winter exerted strong effects on wildlife. Although an adequate supply of feed was still present, very little was available to upland and big game due to the snow pack. The snow pack coupled with blizzards also made protective cover from the elements inaccessible in many instances. As a result, wildlife, particularly upland game, suffered.

Through a seeddown program, grassland nesting and escape cover has been continuously improved on our management units. Most cropland is seeded down to clover, alfalfa, mixed grasses, etc., as full possession is acquired. Seeddown for 1967 was successful in general; however, some stumbling blocks were encountered. Late spring freezes delayed successful plantings while excessive moisture in June and damaging hail over some areas during July resulted in damage to some new seeding. Of the 2,600 acres seeded last year, a few will require re-seeding in 1968.

Although weather conditions were erratic throughout the growing season, established grassland cover was affected very little. Vegetative growth proceeded normally and adequate cover was at an optimum during the nesting season. However, indirectly the effects of weather on private lands, primarily, was devastating. Low moisture content in vegetation and soil combined with a long, mild fall season gave way to an increased number of grass fires and acres with cover destroyed by fall plowing. As a result, the amount of winter cover and 1968 nesting cover was drastically reduced to an all-time low ever the District.

Farmers state that 1967 weather played havoc with their cropping season. Crops were started late, saturated by excessive precipitation in June, and then plagued with lack of moisture through the remainder of the season. Practically all crops were harvested by mid-October. Below normal yields were reported throughout the District. Following crop harvest, extensive fall plowing was possible as a result of a dry, mild fall.

With the approach of winter the food supply available to wildlife was extremely low. This was primarily due to increased cutting of immature corn for silage, low yields of corn and feed covered by fall plowing. Also, freezing rain during the third week of December left a thick sheet of ice over the ground making much of the remaining feed unavailable to wildlife until spring. It is hoped that the 20 feed plots established on WPA's during 1967 and additional plots established by other agencies on State and private lands will compensate some for the diminishing feed supply. The loss in wildlife food and cover during 1967 is, indeed, not a sight for sore eyes.

With an abundance of moisture to trigger the growing season, aquatic vegetative growth was normal. Dense rank stands of wetland plants were present by the nesting season which served as excellent nesting cover. With the onset of wanting precipitation and receding water-tables during the summer, Type I, II, III and some IV marsh plants began suffering. Although practically all aquatics had reached maturity prior to the onset of dreaghty conditions, plants and wildlife were affected. Dry Type III and some Type IV marshes by August forced adult birds and their broods to accept residence on Type IV and V marshes furnishing escape cover of lesser quality. It is evident that late broods were adversely affected and a possible increase in fatalities inevitable.

II. WILDLIFE

A. Migratory Birds

2. Waterfowl - (Anseriformes)

Waterfowl began moving into the eleven-county district during mid-March. It is difficult to pinpoint the actual date because of the size of the working area. Our first observation was on March 19th when a Mallard was noted on private land. Numerous ducks and geese were present by the end of March.

Breeding conditions were excellent. The most common species in the breeding population was the blue-winged teal followed by lesser scaup, mallard, ringneck, redhead, gadwall and pintail. It is evident that many of these birds continue or begin courtship activities in the area while waiting to proceed further north.

A system to survey the breeding population was developed this year and conducted for the first time. Evenson and Christenson Units in Kandiyohi County and the Dismal Swamp Unit in Big Stone County were established as annual block-count areas and assigned study numbers 1, 2, and 3 respectively. These units are to be surveyed twice each year to determine the breeding population. The number of lone males/pairs for each of the two counts and the over-all total for each block were as follows: Block 1, 9/31; 10/5 for a total of 19/36. Block 2, 2/20; 11/9 for a total of 13/29. Block 3, 23/19; 36/40 for a total of 59/109. For all these blocks the total duck breeding population surveyed was 91/174. A total of 184 coot were counted during the surveys. A table of summarization will be used next year for the above information when another annual count is available for comparison. The techniques of running the breeding population survey are organized in the new Wildlife Inventory Plan.

Water conditions were excellent through mid-July. Extreme dry weather resulted in many marshes drying up by late August. Our first random brood observation was on June 19th when a brood of Blue-winged teal was noted on private land. Brood surveys were formally organized and conducted in 1967. The specific techniques and maps are located in the Wildlife Inventory Plan. Two brood transects were developed and each surveyed twice. The Big Stone County transect involves a 42-mile route and the Pope County transect runs for 53.5 miles. We recorded three duck broods and five young coot on the first count, and 55 duck

9.

broods and 62 young coot on the second count. These figures may be summarized in table form next year when comparisons are available.

The fall migration was usual in that it was inconspicuous as it apparently continued throughout October and early November. Freeze-up locally occurred in early October and was followed by a warming trend. The final freeze-up was in late October. Canada, snow and blue geese and whistling swan are commonly observed in the District throughout migration periods.

2. Water and marsh birds - (Gaviiformes, Ciconiiformes, Gruiformes)

Great Blue herons and American egrets are common to the entire district. One known colony exists on the Stearns County Lovell Lake Unit. Pied-billed grebes are common nesters and coot are very common to the area. The green heron, black-crowned night heron, least bittern and American bittern are observed regularly. Both Virginia and sora rails are known to exist commonly throughout the district.

3. Shore birds, gulls and terns - (Charadriiformes)

Woodcock were noted on a management unit for the first time when two were observed on the Ewert Unit in Cottonwood County. Non-confirmed reports of woodcocks in the district have been made before.

Wilson's snipe are very common during spring and fall migrations and are fairly common throughout the warm season. Sandpipers, yellow-legs and plovers are common on most units but neither complete identification nor census was made.

The herring Franklins and ring-billed gulls were common warm-weather residents as are the black tern. Forsters tern have been noted occasionally.

4. Doves - (Columbiformes)

Mourning doves are common residents and frequently nest in both ground and tree sites. Attempts were made to band doves, but pre-baiting was evidently started too late and we were unsuccessful.

B. Upland Game Birds - (Galliformes)

Some of the best pheasant range in Minnesota is included in the district. Pheasants are common on most units during any season. Extensive fall plowing has eliminated an extremely large percentage of feeding cover on private land and burning has had a likewise effect on winter cover. The result is that our easement and purchase units and the State Wildlife Areas are often the only remaining cover areas available for long distances. Nesting cover has continued to decline with the shift from small grain to row crop farming trends. Here again we find that State and Federal lands are supplying many of the nesting oases remaining.

A random sex-ratio count was made in the district during the winter of 1966-67. A total of 126 males and 231 females were recorded for a ratio of 1:1.83. These data furnish further proof that the fall hunt has little effect on the pheasant population.

Hungarian partridge were observed on private land in Swift, Kandiyohi, and Lac qui Parle Counties.

C. Other Birds - (Falconiformes, Strigiformes, Passeriformes, and Pelecaniformes)

Marsh, red-tailed, sparrow and red-shouldered hawks are frequently observed while many other species are present but identification is not made. One snowy owl was observed near the Grossman Unit in Stevens County. Great-horned owls remain common and barn, screech and barred are occasional visitors to the district.

Double-crested cormorants and white pelicans are occasionally noted in the district, usually in flight. Crows and belted kingfishers are common during the warm season and some crows remain through the winter.

Perching birds make use of the many groves, building sites, and brushy areas to an undetermined but believed-to-be high degree. The results of the 1967 Christmas Bird Count were not available to include in this report.

D. Big Game Animals

White-tailed deer are common visitors and residents on many management units. Adult deer are observed throughout the year and fawn are commonly sighted in mid-summer. Some excellent habitat is available to them.

E. Fur Animals, Predators, Rodents and Other Mammals

Muskrat and mink continue to maintain a healthy population except in the southern two counties where a seemingly-annual late summer drought causes most so-called permanent marshes to dry up.

Beaver and possibly otter are known to inhabit nearby areas, but there aren't any known residents on fee title lands.

Red fox, striped skunk, spotted skunk, racoon, badger, and woodchuck are common in the district. Cottontail rabbit, fox squirrel, and gray squirrel are also common. Thirteen-lined ground squirrel, Franklin ground squirrel, pocket gopher and certain chipmunks are abundant as well.

F. Rare, Endangered and Status-Undetermined Species

There are no threatened species known to exist in the district.

G. Fish

Only two units are known to be capable of maintaining fish populations. They are the Wiebener Unit in Jackson County, and the Thompson Unit in Big Stone County. The vast majority of our units contain type IV marshes and they frequently freeze out. This freeze-out has a direct benefit since rough fish could otherwise be a much more serious problem. Several units border meandered lakes providing possible public access to the lake.

III. W.P.A. Development and Maintenance

A. Physical Development

TABLE III		MAJOR PHYSICAL PROJECTS			Remarks	
County	Unit	Item and Amount				
Big Stone	Artichoke Lake	Ditch Plugs,	2		C	2
	Dismal Swamp	Ditch Plugs,	15		C	17
	Jorgenson	Ditch Plugs,	4		C	21
	Lindgren Lake	Ditch Plugs,	2		C	23
	Barry Lake	New Fence,*	80 rods		F, 3 md	
	Helgeson	New Fence,	120 rods		F, 6.4 md	
	Hillman	New Fence,*	275 rods		F, 16 md	
	Krogstad	New Fence,*	550 rods		F, 11.7 md	
	Menzel	New Fence*,	125 rods		F, 5.5 md	
	Artichoke Lake	Old Fence Removal			F, 10.3 md	
	Dismal Swamp	Old Fence Removal			F, 6 md	
	Karsky	Old Fence Removal			F, 7 md	
	Krosch	Old Fence Removal			F, 8 md	
	Rasmussen	New Fence*,	255 rods		F, 13.5 md	
Jackson	Aasen	Ditch Plugs,	8		C	31
Kandiyohi	Christenson	Ditch Plugs,	6		C	37

Account
Totals

				12.	
County	Unit	Item and Amount	Remarks	Accum Plugs	
Kandiyohi	Evenson	Ditch Plugs, 13	C & Army NG	50	
	Quinn	Ditch Plugs, 5	C	55	
	Randall	New Fence*, 80 Rods	F, 5.4 md		
	DeGroot	Old Fence Removal	F, 3 md		
Lac qui Parle Pope	Freeze	Old Fence Repair, 40 rods	F, 1 md		
	Bailey	Old Fence Removal	F, 3 md		
	Bredburg	Ditch Plugs, 12	C	67	
	Froland	Ditch Plugs, 3	C	70	
	Heidebrink	Ditch Plugs, 7	C	77	
	Staack	Ditch Plugs, 1 repair	C	78	
	Stenson Lake	Ditch Plugs, 2	F, 3.5 md	80	
	Stewart	Ditch Plugs, 3	C	83	
	Thone	Ditch Plugs, 8	C	91	
	Berg	New Fence*, 200 rods	F, 8.4 md		
	Stenson Lake	New Fence*, 175 rods	F, 8.7 md		
	Bailey	Old Fence Removal	F, 1.5 md		
	Brosh	Old Fence Removal	F, 12 md		
	Sylvester	Old Fence Repair, 80 rods (Tr. 105)	F, 2 md		
Stearns	Evjen	Potholes Blasted, 4	C, \$80	107	
	Lovell Lake	Ditch Plugs, 16	C	111	
	Allen	Ditch Plugs, 4	C		
	Damer	New Fence*, 140 rods	F, 8 md		
Stevens	Lovell Lake	Old Fence Removal	F, 2 md		
	Benson	Ditch Plugs, 1	C	112	
	Edwards	Ditch Plugs, 3	C	115	
	Freeman	Ditch Plugs, 1	C	116	
	Harrison	Ditch Plugs, 2	C	118	
	Joos	Ditch Plugs, 1	C	119	
	Kill	Ditch Plugs, 2	C	121	
	Kopitzke	Ditch Plugs, 6	C	127	
	Lamprecht	Ditch Plugs, 1 1/4	C	141	
	Smith	Ditch Plugs, 1	C	142	
	Joos	New Fence*, 145 rods	F, 11.9 md		
Swift	Welsh	Ditch Plug, 1	C	143	
	Hamman	Ditch Plugs, 4	C	147	
	Lubenow	Ditch Plug, 1	C	148	
	Bowman	New Fence*, 440 rods	F, 20 md		
	Lindahl	Old Fence Removal	F, 3.9 md		
	Westhausen	Old Fence Removal	F, 5 md		
	Hamman	Potholes Blasted, 5	C, \$100		
	Welker	Potholes Blasted, 9	C, \$180		
Traverse	O'Neill	Ditch Plug, 1	C	149	

*Including removal of old fence

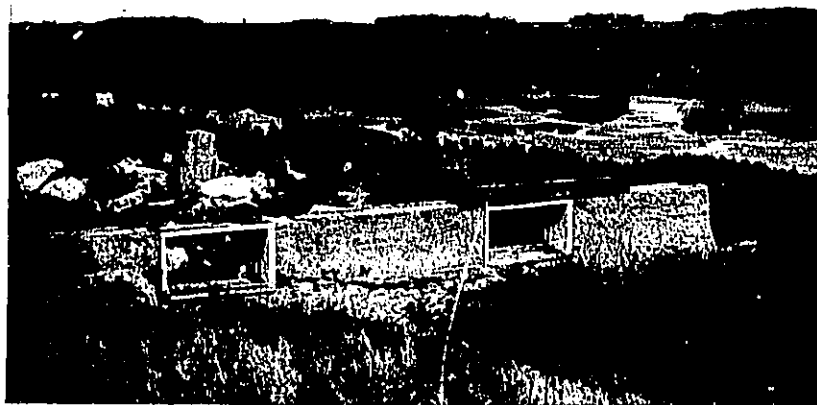
C= Contract

F=Force Account

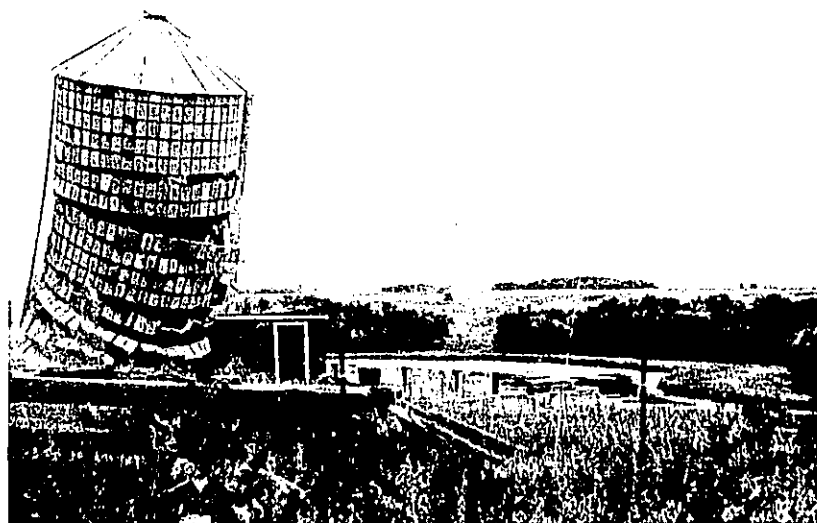
md= 8 hour man days

TOTAL 149

The ditch plugging completed under informal contract was supervised at all times by one of the Wetland Managers. Old building sites were cleaned up prior to the contract and the foundations were leveled and covered by the contract dozer. Tile lines were destroyed to restore marshlands wholly contained on our land. Included were two on the Thone Unit, one on the Froland Unit, both in Pope County, and two on the Edwards Unit in Stevens County. In summary, a total of 147 plugs were constructed, 5 tile lines destroyed and 26 old building sites leveled. The entire expenditure was \$2,450 and averaged \$9.75 per plug or tile line and \$37 per building site.



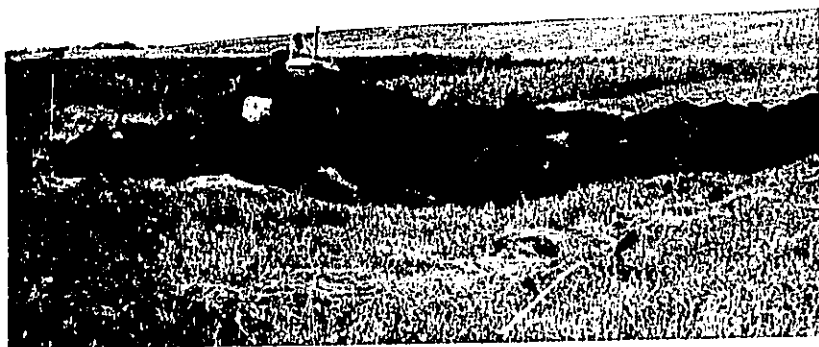
Barn Foundation Leveling, Edwards Unit, Stevens County
67, 43, 9-15, JJH



Silo being pulled over. Note bulldozer in bottom
right corner. Edwards Unit, Stevens County
67, 43a, 9-15, JJH



Constructing Ditch Plug. Kill Unit, Stevens County
67, 45, 9-15, JJH



Constructing Ditch Plug, Kopitzke Unit, Stevens County
67, 34, 9-14, JJH



Force Account Ditch Plug Constructed by Hand, Stenson
Lake Unit, Pope County. 67, 29, 6-2, JJH

The main problem in fencing continues to be the removal of old fence lines. For every mile of new fence constructed there seems to be a mile and a half of old, rusty, run-down junk fence to remove. Plans are being made to build a wire roller which should help greatly. The addition of a portable, power posthole digger in 1966 has helped to greatly increase efficiency in constructing fence.

A total of 80 miles of boundary posting was completed on 77 units involving 129 tracts. Many of these tracts were additions to existing units. The Benson Wetland Management District had 147 Units open to public hunting in the fall of 1967 which totaled 21,000 acres.

A small amount of pothole blasting was contracted mainly to demonstrate its use in the area for private landowners. A total of 18 holes were blown as listed in the preceding table.



A/N Pothole, Rice Unit, Swift County

67, 19, 5-2, JCN

A new routed sign was erected on the Rice Unit, a demonstration area in Swift County. It has been up for nearly a year and somehow hasn't yet been desecrated? A similar sign was placed on the Artichoke Lake Unit in Big Stone County indicating a recreation area where the Chokio Sportsmen's Club constructed a boat landing by permit.



Rice Unit demonstration area sign erection. Motzko, Schliep & Nelson (l-r).

67, 28, 5-25, JJH

All ditch plugs, tile lines destroyed, and building sites leveled were seeded to rye and alfalfa by hand seeder. Rip-rap was placed on the spillways of some larger plugs. The Freese Unit plug was repaired by hand.

All large dead tree snags were sawed down on the following units: Artichoke Lake, Dismal Swamp and Bauman in Big Stone, Sonstegard in Kandiyohi, Brosh in Pope and Welsh in Swift County. These snags offered possible perching sites for avian predators. When sawed down they make good loafing logs for ducks.

A wooden bridge located on our Heidebrink Unit in Pope County was destroyed and barricades erected on the approaches. The bridge was rapidly deteriorating and was considered unsafe for public use. Repair of the bridge would have been impractical due to expenses involved.

Numerous boundary lines were measured and marked out when cadastral surveys were not made at the time of acquisition. All new food plots were measured and marked.

Many old building sites had open cisterns and wells presenting serious safety problems. These were all checked and blasted in or covered with wire. The contract dozer later filled and covered them completely. All new fencing from the past year was checked and repaired. Minor maintenance was performed on vehicles and equipment throughout the year.

B. Plantings Including Soil and Moisture Activity

1. Trees and Shrubs

A few units may be benefited greatly by shrub plantings and in some cases with trees. The Minnesota Conservation Department is cooperating on the Olson Lake Unit in Kandiyohi County. We had the ground tilled and they planted 5,000 honeysuckle and 400 red cedar. The State will cultivate between the rows and the Willmar Sportsmen are supplying simazine for band weed control. These plantings are designed to catch snow for marsh runoff and to provide upland game cover.



Minnesota Conservation Department planting shrubs on
Olson Lake Unit, Kandiyohi County

67, 27a, 5-2, JCN

2. Grasslands

A total of 2,600 acres of ex-cropland was seeded down to small grain and alfalfa. This was accomplished by cooperative farming agreements with 103 individual farmers. The usual arrangement was for the operator to supply all the small grain and five pounds of certified alfalfa per acre in addition to doing the work. For this he would get all the nurse crop share. We supplied some alfalfa seed to be applied in addition to the operator's share, but not in all cases because of financial reasons. Most of the cropland involved was very marginal and will be best suited to grass and nesting cover. Limited acreages are being established in permanent food plot rotations as described below. Many additional contacts were made to determine from past landowners or operators that the land was already seeded to permanent cover. A summary of seeding activities is included in NR-8, Cultivated Crops.

C. Cultivated Crops

Upland game food plots are being established where there is a need and suitable cropland is available. Rotations involving corn, small grain-alfalfa and alfalfa were used on 20 separate units in 1967 and 33 are planned for 1968. Ten acres are required for each of the three plots on each unit. Our share each year is one-third of the corn left standing and all the alfalfa to be plowed down. The operator on each rotation system gets all the small grain and two-thirds of the corn each year. To eliminate the problem of the operator leaving the poorest corn for our share, an alternate-row harvest system has been set. The operator takes four rows and leaves two rows alternately across the field. This has worked out nicely and even during rough winter the majority of the standing corn is available to upland and big game since the first few rows catch most of the snow. The plots are located near good winter cover and on units where plenty of other good nesting cover exists.



Food Plot on Karsky Unit, Big Stone County
67, 5, 3-3, JJH

D. Collections and Receipts

1. Building Disposal

Surplus real property was disposed of through bid invitation. Sales were held in January and in April. Thirteen building sites were included and involved 35 buildings. Good response was made as 47 bids were placed. Total receipts were \$4,958.87, and unfortunately this money is not available for needed development projects in the wetlands program. These funds are deposited in the general treasury of the United States.

Some of our major headaches are kindled in the real property disposal system. Many problems develop with non-payment, late removal of buildings, no clean-up around sites, and others. Threats of burning buildings because of non-compliance are being backed up by actual burning.



Building removal problems showing usual half-done job
and general mess. Olson Lake Unit, Kandiyohi County
67, 26, 5-2, JCW

E. Control of Vegetation

Control activities were necessary on 17 management units. Weed problems are evidently going to increase as more land is acquired. Our limited budget can be drained in a hurry on weed control projects alone. The ironic part is that the weed patches are excellent upland game cover, but we are legally responsible to control noxious weeds. Our control projects are summarized in NR-12.

IV. RESOURCE MANAGEMENT

A. Grazing

Grazing on a permit basis has been allowed when not in conflict with basic wildlife management objectives, and size and condition of the unit warrant such use. Fencing, cropland grass seeding and retired pastures are factors which must be considered prior to permitting grazing on our WPA's. Very moderate grazing from the standpoint of benefiting wildlife habitat is our goal. Grazing capacity continues to be based on the system of animal unit months (AUM's). A minimum rate of eight acres of grass per head

for a maximum season of five months (May 1st to September 30th) has remained the criterium for determining AUM's permitted on our WPA's. The price of \$2.00 per AUM is still indicative of fees charged in the area. This figure and/or acreage per AUM may be adjusted later as deemed necessary.

TABLE IV		GRAZING PROGRAM, 1967		
Management Unit & County	Grazing Habitat	Total AUM's	Date of Use	Revenue Collected*
Bakalyar (2), Cottonwood	48	30	5/1-9/30/67	\$60
Edwards (16), Stevens	128	80	5/1-9/30/67	160
Elder (19), Pope	145	90	5/1-9/30/67	180
Evjen (8), Pope	116	60	5/1-9/30/67	120
Ewen (3), Jackson	112	70	5/1-9/30/67	140
Freeze (4), Kandiyohi	120	75	5/1-9/30/67	150
Rice (6), Swift	52	30	5/3-9/30/67	60
Sonstegard (20), Kandiyohi	115	67.5	5/1-9/30/67	135
Stasack (6), Pope	30	15	5/1-9/30/67	30
Stewart (14), Pope	58	31.5	5/16-9/30/67	63
Welsh (4), Swift	176	110	5/1-9/30/67	220
Wetherell (14), Swift	99	44	6/1-9/30/67	88
1967 Totals	<u>1,199</u>	<u>703.0</u>		<u>\$1,406.00</u>
1966 Totals	<u>804</u>	<u>428.0</u>		<u>\$856.00</u>

* Total @ \$2/AUM

As stated in our previous narrative report, anticipated interest in grazing our waterfowl production areas has increased almost two-fold as more management units are fenced and pastures are rehabilitated. Table IV above shows the extent of our 1967 grazing program, while totals for 1966 and 1967 reflect the expansion of the program. Grazing privileges were granted on 12 management units for the reporting period, while only 7 permits were issued in 1966.

Breaches of grazing agreements did not impose a problem last year, although some difficulty was encountered with trespass grazing and insistence of exclusive grazing rights. Until our back-log of fencing can be wiped out, trespass grazing will continue to be a problem. Also, last year several landowners claimed that our realtors promised them exclusive and perpetual grazing rights on lands which they sold to us. Although probably cases of misunderstanding, it is evident that coordination of efforts with the Area Acquisition office could stand some improvement.

B. Haying

The establishment of a haying program on our WPA's has continued to be avoided. The destruction of habitat and setting of precedences are the main factors against it. When possible, native hay will be included in grazing units and tame hay will be retired to allow native grass invasion.

In the future, haying may be necessary in a few instances where a monotype must be opened up or other unusual circumstances exist. These cases will be rare, and each will need individual attention.

C. Fur Harvest

The majority of our production areas as managed for waterfowl provide excellent habitat for muskrats and mink. Other furbearers are involved also, but to a very small degree. Habitat management that improves and/or maintains furbearer populations when consistent with the waterfowl management objectives is carried out when possible.

Once full possession is acquired of lands and they are posted with our sign "Waterfowl Production Area-Open to Public Hunting," trapping is permitted on a free entry basis. No partiality is shown to trappers. It is anticipated that each year trapping territories established on a first-come, first-served basis can be worked out between individual trappers. So far there have not been any problems along this line.

Interest in trapping has increased slightly over the 1966 season, but still activities were light and widely scattered over the district. A few trappers have shown dissatisfaction in not being able to post their trapping territory against trespass, although this is to be expected. In time and through good public relations, interest in trapping on our WPA's should increase. Few trappers over a widely-scattered area and insufficient man-hours has made it impractical to obtain realistic data for analyzing the status of the resource.

D. Other Resources

A growing interest for the management of bee apiaries on our production areas has been recognized. Five apiaries existed on WPA's during 1967. Special-use permits for bee keeping were issued covering the five bee yards at a modest charge of 10¢ per hive or colony. The rate has increased to \$10 per apiary beginning in 1968.

V. FIELD INVESTIGATION OR APPLIED RESEARCH

A. Wildlife Management Studies

Although the Benson Wetland District is still in its formative years with high priority development activities occupying most of the time, one wildlife management study has been set up.

1. Cooperative Nest Cover Study

The Benson Wetland District has been selected to take an active part in this comprehensive wildlife management study. As a cooperative study, several refuges and wetland districts throughout the prairie pothole region will participate by furnishing study sites, establishing plots, maintaining plots, and collecting and submitting data. Wildlife Management Biologist Merrill Hammond heads the project with responsibilities for supervision and research. Research assistance will be furnished by the Northern Prairie Wildlife Research Center.

Objectives of the nest cover width study are as follows:

Primary

- 1) To compare dummy nest survival rates in different cover block widths.
- 2) To compare natural nest densities in different cover block widths.
- 3) To compare natural nest survival rates in different cover block widths.

Secondary

- 4) In some samples, to compare the relative attractiveness of different cover types and cover densities.
- 5) To compare dummy nest and natural nest survival rates.
- 6) To determine the efficiency of the flushing device used, and of the search after haying.

Justifications are readily apparent. At present many voids in knowledge of optimum desired wildlife cover types and conditions exist. Results of this study should give us information which will place practical management of grazing, haying, and agricultural practices on a sound basis with wildlife management. Resulting information will also be of great value where land purchases are made for wildlife habitat.

The study is just in a formulation stage. Cover plots were selected in 1967, while establishment and maintenance of plots, data collection, and data submission will continue for several years hence. Three plot sites were selected on WPA's in the Benson District. They are located in Big Stone and Stevens Counties.

B. Biological "Tinkering"

Like wildlife management studies, biological tinkering activities have been limited for similar reasons.

1. Banding

Banding operations for the year were very limited. Only four hand-reared pintails were banded during July. Our Wetland District wishes to contribute to the nationwide banding program, but until development activities subside and additional manpower is available, trapping and banding will be nominal.

An attempt to initiate a pre-season Dove trapping and banding program during 1967 was unsuccessful. Traps were procured, sites were selected, and pre-baiting conducted for three to four weeks, but traps were never erected on sites. Concentration of doves at pre-baiting sites was not significant enough to justify setting traps. Failure was contributed to the project's late start as a result of limited time and manpower.

2. Pothole Blasting

Pothole blasting which could be classified as biological tinkering was continued during 1967. Eighteen additional potholes were created during the year. Nine on the Walker Unit in Swift County, and four on Evjen Unit in Pope County were blasted August 28th, while five on the Hamann Unit in Swift County were blasted October 5th. Two of the potholes blasted on our Evjen Unit served a two-fold purpose. The blast not only provided an opening in two marshes, but also destroyed existing tile lines serving to drain the marshes.

The primary objective for pothole blasting on our wetlands is to test the effectiveness of this proven developmental technique for increasing production area on small wetlands choked with dense stands of vegetation. A secondary objective is to establish demonstration areas for future reference and public relation purposes. Although the ultimate effects of blasting are known from previous investigational studies, it will be interesting to observe these small wetlands periodically over the years to determine their acceptance by waterfowl for nesting activities.

On two occasions during the 1967 nesting season, a pair of mallards was observed making use of a one-year-old pothole created on our Rice Unit in Swift County. The ten potholes blasted during 1966 have not yet shown any definite signs of vegetative encroachment, although much settling has occurred.

3. Records of Observations

A day by day record of observations, both wildlife and wildlife-associated, is a necessary part of any station's files. Good records form the backbone for all successful reports and sound management as well as providing a comprehensive historical record for the station.

Last year a system for recording and filing general observations was initiated that has proven very beneficial to this station's needs. All observations by qualified personnel are first recorded in their individual field diaries by location, date, kind and number. At regular intervals the station clerk transfers entries from each field diary to two separate permanent records. One record is a chronological listing of all observations and is retained on file for use in narrative report preparation. The other record is a listing of all observations by counties, units, tracts, and private lands. This listing will serve as a permanent historical record for individual areas. In the future as observations increase it may become necessary to demarcate between waterfowl and other observations to improve efficiency in use of data.

C. Wildlife Inventory

Assisted by wildlife management biologists, detailed waterfowl inventory procedures were prepared for the Benson Wetland District during 1967. Following their preparation, waterfowl breeding pair and brood surveys were conducted for the first time. Tabular data from these surveys was forwarded to the management biologists for computation. By mid-December the first draft of a comprehensive wildlife inventory plan covering waterfowl was completed for the Benson Wetland District.

VI. EASEMENT ADMINISTRATION

Because of the large number of tracts under easement, our primary means of inspection is visual examination from airplanes. Ground checks are made only in cases of violations, apparent

violations, and observation of questionable activities that cannot be fully analysed from air examinations.

In 1967 aerial inspections of easements were accomplished during eight flights occurring on November 29, 21, 22, 27, and 30, and December 4, 5, and 6. Easement checks were accomplished at approximately the same time as the previous year, although snow cover was not a limiting factor this year. Aerial inspections were conducted for us by Bob Panzner, Supervisor of Benson Area Acquisition Office.

All 344 easement tracts were examined by air this year as compared to 225 checked in 1966. Flying time in a rented single engine, high-winged aircraft was 25½ hours. The rate for rental of the aircraft was \$20 per hour as compared to \$25 charged in 1966 for a larger plane. The smaller 170 Cessna proved to be more satisfactory for easement inspection because of its capability to fly at a slower speed. Total expense for rental of pilot and plane for the 1967 inspection was \$505 and in 1966 the cost was \$462.30.

Possible easement violations detected by air were checked again on the ground. Prior to contacting the violators, courthouse records were investigated for current ownership. All personal contacts should be completed by the end of January, 1968. In cases of draining and filling, the owner and/or tenant will be directed to correct the damage during the coming spring. They also will be reminded of the terms of the easement contract, and of their responsibility to protect the land in question. All personal contacts will be documented by certified letters to the owners and/or tenants with copies to the regional office and station files. During early summer 1968, all draining and filling violations will be inspected again for correction of damage. Personal contacts followed by certified letters will be made also for all burning violations, even though corrective measures are not possible and blame is hard to pin-point.

Table V which follows presents in tabular form information concerning the 27 easement violations detected during the 1967 inspection.

TABLE V
EASEMENT VIOLATIONS - 1967

Easement Name and Number	County	Aerial Check	Violation
Anderson, H. (153X, 1,2)	Big Stone	12/5/67	Draining 1
Beck, E. (34X)	Big Stone	12/6/67	Draining 2
Jenson, F. (68X)	Big Stone	12/5/67	Draining 3
Kaercher, L. (67X)	Big Stone	12/6/67	Burning
Kleespale, C. (51X)	Big Stone	12/6/67	Draining 4
Kleindl, C. (31X)	Big Stone	12/5/67	Draining 5
Lindquist, A. (47X)*	Big Stone	12/6/67	Burning
Lindquist, A. (73X, 1)	Big Stone	12/6/67	Draining 6
Mathison, N. (147X)	Big Stone	12/6/67	Burning
Salls, O. (157X, 1)	Big Stone	12/5/67	Burning
Storeim, J. (36X)	Big Stone	12/6/67	Draining 7
Alinder, S. (34X)	Kandiyohi	11/20/67	Burning
Kirkhof, E. (86X)	Pope	11/30/67	Draining 8
Skarhus, G. (54X)	Pope	11/30/67	Burning
Solbreken, O. (55X)	Pope	11/30/67	Draining 9
Johnson, A. (50X)	Stevens	12/4/67	Burning
Minnesota Farms (16X)	Stevens	12/4/67	Burning
Hansen, E. (17X)**	Traverse	12/4/67	Burning
Smith, James (33X)***	Traverse	12/4/67	Burning

*Val Roggenbuck - present owner

**Leo Murphy - present owner

***Louis Borghesinek - present owner

Violations Summary:		1966	1967
Draining	:	4	9
Burning	:	5	10
Filling	:	2	0
Total Violations	:	11	19
Total Violators	:	9	19

Violations occurred on about 5.5% of the 344 existing easements. A portion of this increase can be contributed to the long dry fall, increased number of easements, and changes in ownership, but there are other reasons involved. Several violators contacted insist that conditions of the easement agreement were not interpreted to them correctly in the beginning. Also, it is possible that potential violators could be forming the opinion that our Bureau is not strictly enforcing their easement program.

Draining and filling violations noted in 1966 were followed up in late spring 1967 to insure that corrective measures were taken. All violators were cooperative except for Arthur Schneider. Mr. Schneider demonstrated his intention to disregard our easement regulations by planting beans over the wetlands which he filled. A field solicitor from the Department investigated the violation and recommended that prosecution not be attempted on this minor, but direct violation because of its possible detrimental effect to the acquisition program. This was disappointing to the Wetland Management staff who spend many hours and funds in easement administration.

The same general problems encountered in 1966 continued to persist during 1967, although two additional problems have evolved. As evident from the above, violations are increasing. This increase is taxing the management staff heavily in man hours and funds necessary to administer the easement program efficiently. Secondly, and as mentioned above, is the possibility that some of the increase in violations could be directly associated with the reluctance of our Bureau to prosecute violators.

Public acceptance of our easement program continues to remain low because lands are perpetually encumbered. In the landowner's opinion, this makes it difficult to sell their land at fair market value.

VII. PUBLIC RELATIONS

A. Recreational Uses

Public use and acceptance of our program increases each year. Non-consumptive use of wetland units is being recognized by the public as being both interesting and challenging. There were an estimated total of 9,700 visits to the 147 units for hunting use, and 30,195 visits over-all for wildlife-oriented activities. Total estimated non-wildlife-oriented visits was 700 and non-recreational use, including grazing and farming, was 1,600 visits.

Information is being gathered on number of cars, hunters, trappers and any individuals making use of the units. So far, the data are so scattered and generalized that they aren't of much use when all the possibilities of bias are considered.

B. Refuge Visitors

TABLE VI WETLAND MANAGEMENT OFFICE VISITORS		
Person or Group	Date	Purpose
Leslie Cin, Morris	1/4/67	Surplus buildings
Oliver Christenson, Morris	1/4/67	Surplus buildings
Glen Dordall, Hancock	1/5/67	Cropping
John Edwards, Morris	1/6/67	Surplus buildings
Earl Hoffman, Hancock	1/6/67	Cropping
Dale Carstans, Stevens County	1/7/67	Cropping
Walden Nelson, Pennock	1/9/67	Surplus buildings
Warrak Braaten, Glenwood	1/9/67	Bee Permit
Gordon Krosch, Chokio	1/10/67	Cropping
Galen Ward, Glenwood	1/12/67	Cropping
Ray Berens, Benson	1/18/67	Rental of dozer
Herman Thessin, Raymond	1/19/67	Cropping
Sig Berg, Cyrus	1/20/67	Cropping
Mr. and Mrs. L. Elder, Hancock	1/25/67	Land use
Harold Jacobson	1/25/67	Surplus buildings

Ed Serr & Mrs. Serr	1/23/67	Surplus buildings
Andy Anderson, RBS, Aberdeen, S.D.	1/27/67	Visit
Bernard Stads vold, Starbuck	1/27/67	Surplus buildings
Irvin Thone, Benson	1/27/67	Cropping
Clinton Hinseth, New London	1/30/67	Surplus buildings
Wm. Zeltwanger, Hancock	2/2/67	Cropping
Harold Jacobson	2/6/67	Building & land inquiry
Mrs. Gerry Pierce, Benson	2/6/67	Surplus buildings
Mr. & Mrs. V. Dokkebakken, Benson	2/6/67	Grazing
Richard Erickson, Willmar	2/6/67	Surplus buildings
Harris Gjerdingen, Starbuck	2/7/67	Surplus buildings
Clarence Fischer & family, Lake Lillian "		Surplus buildings
Joe Wersinger, Starbuck	2/7/67	Surplus buildings
Ralph Brendan, Glenwood	2/7/67	Surplus buildings
Lloyd Miller, Alexander	2/9/67	Cropping
Joel Taylor, Benson	2/10/67	Tree Planting
Herb Ellingson, Benson	2/13/67	Surplus buildings
Mr. & Mrs. L. Elder, Hancock	2/13/67	Seeding
Wm. Zeltwanger, Hancock	2/20/67	Seeding
David Bjerk, Benson	2/24/67	Career Information
Steve Maanum, Benson	2/24/67	Career Information
Ervin Wall, Glenwood	2/27/67	Fencing
Wilbert Mau, Donnelly	2/27/67	Seeding & Survey
Lloyd Schmidt, Appleton	2/27/67	Seeding
Peter Jensen, Peamock	2/28/67	Seeding and buildings
Ed Elbert, Peamock	2/28/67	Seeding and buildings
Lewis Elder, Hancock	2/28/67	Grazing
Lennie Larson, Starbuck	3/2/67	Cropping
Charles Kelly, Spicer	3/2/67	Haying
Bert Flaten, Murdock	3/6/67	Cropping
Floyd W. Manthei, Raymond	3/6/67	Building removal
Stanley Staples, Morris	3/6/67	Tree planting
Art Thone, Benson	3/9/67	Surplus pressure system
Ken Struck, Donnelly	3/13/67	Township road
Lawrence Lembecke, Donnelly	3/13/67	Township road
Myron Struck, Donnelly	3/13/67	Seeding
Mr. & Mrs. Bruce Mattson, Lake Lillian	3/13/67	Surplus buildings
Robert Staples, Morris	3/14/67	Tree Planting
Mr. & Mrs. Henry Ruter, Peamock	3/17/67	Surplus buildings
Fred Thelen, St. Martin	3/21/67	Surplus buildings
Sylvester Salzl, Melrose	3/21/67	Surplus buildings
Wayne Klucas, Benson, ASC	3/23/67	Quonset huts
Mr. Van Slyke, Benson	3/23/67	Quonset huts
Dave Wiley, MCD Game Mgr.	3/27/67	Delineation of Pur. Tracts
Mr. Fults, Morris	3/27/67	Boundary marking
Alvin Tate, Agr. Seed & Weed Insp.	3/30/67	Weeds on Mgt. units
George Croom, Seed and Weed Insp.	3/30/67	Weeds on Mgt. units
Magnus Troen, Seed & Weed Insp.	3/30/67	Weeds on Mgt. units
Arthur Millerbernd, Dist. Super. S&W	3/30/67	Weeds on Mgt. units
Barney Schrank, As.R.M., Sherburne NWR	4/4/67	Visit

Adolph Staack, Sunburg
 Ralph Town, Area Biologist
 Irvin Thone, Benson
 L. Danielson, Correll
 Steve Maanum, Benson
 Peter Golombieck, Chicko
 Gerhard Mitteness, Benson
 Kenneth Hensch, Sunburg
 Gerhard Mitteness, Benson
 Millard Rice, Murdock
 Howard Lang, Benson
 Mrs. Svor
 Sigfred Knutson, Sunburg
 Reuben Rognlin
 Alfred Evjen, Starbuck
 Delloyd Rudningen, Sunburg
 Gerhard Hystad, Sunburg
 Erwin Serr, Sunburg
 Herb Maanum, Benson
 Ray Cameron, Clontarf
 Josephine Thissen, Raymond
 Bill Zeller, Raymond
 Ted Sweep, Spicer
 Kent Olson, Biologist, Huron
 Ray Cameron
 Leon Cobb, Willmar
 Frank Suter
 Bruce Mattson, Lake Lillian
 Glen Laidlaw
 H. C. Ruter, Pernock
 Mrs. V. Dokkebakken, Benson
 Mr. & Mrs. I. Elder, Hancock
 Wayne Klucas, ASCS, Benson
 Bruce Mattson, Lake Lillian
 Frank Martin, R.O., Minneapolis
 Cliff Skarsten, Benson
 Albert Jackson, Starbuck
 William Zeltwanger, Hancock
 Milton Skarsten, Benson
 Eugene Struck, Donnelly
 Chuck Stubbs, Benson
 Ronald Flaten, Benson
 Chester Benson, weed inspector
 Orlo Kvame, Benson
 Chester Benson, weed inspector
 Burdette Robin, Weed inspector
 Ed Smith, R.O., Minneapolis
 Jim Salyer, Washington D.C.
 George Gant, WMO, Fergus Falls
 Mr. Dokken

4/4/67 Grazing
 4/10/67 Conference
 4/14/67 Cropping
 4/17/67 Drainage onto Gov't land
 4/19/67 Conservation project-Scouts
 4/20/67 Grazing
 4/20/67 Grazing
 4/21/67 Grazing
 4/24/67 Grazing
 4/24/67 Grazing
 4/27/67 Drainage
 4/28/67 Surplus buildings
 5/1/67 Grazing
 5/1/67 Grazing
 5/1/67 Grazing
 5/2/67 Road easement
 5/2/67 Road easement
 5/5/67 Surplus buildings
 5/5/67 Information-Duck nests
 5/5/67 Building sale
 5/11/67 Surplus buildings
 5/11/67 Surplus buildings
 5/19/67 Surplus buildings
 5/18/67 Visit
 5/19/67 Surplus buildings
 5/19/67 Bid opening
 5/19/67 Bid opening
 5/19/67 Bid opening
 5/19/67 Bid opening
 5/19/67 Bid opening
 5/24/67 Grazing permit
 6/5/67 Tract information
 6/5/67 Storage building sale
 6/5/67 Building payment
 6/5/67 Inspection
 6/9/67 Grazing
 6/9/67 Weed control
 6/13/67 Cutting hay
 6/13/67 Grazing
 6/14/67 Tract boundary
 6/14/67 Golden Eagle Passport
 6/21/67 Use of Tordon
 6/21/67 Use of Tordon
 6/30/67 Use of WPA for thesis study
 7/6/67 Conference
 7/6/67 Conference
 7/11/67 Inspection
 7/11/67 Inspection
 7/14/67 Visit
 7/25/67 Surplus buildings

Loyal Mathis, DeGraff	8/10/67	Trapping
Carl Stamp, Holstein, Iowa	8/10/67	Trapping
Lee Sweep, Kandiyohi	8/18/67	Building payment
Mike Johnson, ASCS, Benson	8/18/67	Visit
John Carlsen & Son, Mgr. Sherburne NWR	8/18/67	Visit
John Edwards, Morris	8/21/67	Buildings
Alberg Hoverud, Starbuck	8/22/67	Seeddown
Cliff Olson, B.S. County	8/22/67	Haying, weed problem
Francis Eisenreich, Murdock	8/24/67	Pothole blasting
Albert Hoverud, Starbuck	8/24/67	Seeddown
Don Mitteness, Benson	8/24/67	Fencing
Mr. Meinert, Benson	8/29/67	Cow injured related to blasting
Chet Benson, Weed Insp., Benson	8/31/67	Thistle problem
Gilbert Hein, Stevens County	9/1/67	Building removal
Mr. Rene, Benson	9/5/67	Building removal
Mr. Struck, Morris	9/6/67	Posting plot of Pur. Area
Olaf R. Grundseth, Murdock	9/11/67	Information & buildings
Harry Lee, Brooten	9/11/67	Grazing
Milo Hoff, Brooten	9/11/67	Grazing
Albert Hoverud, Hancock	9/12/67	Seeding
Mr. Larson (MCD)	9/12/67	Visit
Walden Nelson, Pennock	9/19/67	Buildings
Irvin Thone, Benson	9/21/67	Machinery & building removal
Lewis Elder, Hancock	9/25/67	Grazing
Arness & Hauge, Terrace	9/26/67	Pothole blasting
Harold Anderson, Kerkhoven	9/26/67	Vacating buildings
Bill Orr, Benson	9/27/67	Land inventory
Leon Cobb, Willmar	9/27/67	Building removal
Winston G. Peterson, Kerkhoven	9/27/67	Seeddown & building removal
Erick Rood, Kerkhoven	10/16/67	Buildings
Wallace Munson, Sunburg	11/3/67	Plowing & Tree Planting
Kelly Wick, Benson	10/31/67	Public Hunting
Winston Peterson, Sunburg	11/6/67	Building removal
Elmer Schultz, Brooten	11/9/67	Building removal
Tom Quinn	11/9/67	Biology Project
Arthur J. Millerbernd, DWI, Starbuck	11/17/67	Weed control
Cliff Bass, DWI, Dawson	11/17/67	Weed control
Chet Benson, Weed Inspector	11/17/67	Weed control
Donald Veslidahl, Brooten	11/22/67	Surplus buildings
Malvin Engen, Pennock	11/22/67	Surplus buildings
Myron Struck	11/28/67	ASCS reconstitution
Dean Paulson, Morris ASC	12/4/67	Crop Allotment bases
Howie Anderson, Morris ASC	12/4/67	Crop Allotment bases

Routine visitors include Paul Wojahn, MCD; Wayne Klucas, ASCS; Paul Pederson, office building owner; Ed Wieland and John Schaarf of MCD; and Area Acquisition Office personnel.

C. Refuge Participation

- 1/10 Presented program to Willmar Sportsmen's Club
Hubert and Womble
- 1/23 Attended West Central Bird Club meeting, Benson
Hubert
- 1/24 Attended Swift County Board Meeting, County Ditch
No. 3 cleanout, Benson Hubert
- 1/26 Met with Gard, DeBates and Severson re. highway
easement procedures, Morris Hubert and Womble
- 2/2 Met with ASCS re. crop allotments, Glenwood
Hubert
- 2/8 Presented program to County weed meeting, Benson
Hubert and Womble
- 3/7 Met with W. Kuka of Willmar Sportsmen's Club re.
projects on WPA's Womble
- 3/8 Met with highway engineer re. easements, Morris
Hubert
- 3/9 Met with ASCC re. ACP practices, Benson
Hubert
- 3/20 Presented program to Federated Women's Club "Coterie",
Benson Hubert
- 3/27 Met with Dave Wiley, MCD, re. delineation, Benson
Womble
- March Met with all eleven county auditors during month re.
Compliance Report. Hubert and Womble
- 4/1 Met with Lt. Carlson, NG, re. use of heavy equipment,
Willmar Womble
- 4/4 Met with Ed Wieland, MCD, re. tree planting, Benson
Womble
- 4/16 Attended Middle-Manager Training Course, Arden Hills,
St. Paul Hubert
- 5/19 Met with Ed Wieland, MCD, re. tree planting, Benson
5/3 Womble
- 6/2 Met with Dr. Patterson of 3M Co. re. pesticide
experiment, Benson Hubert and Womble
- 6/13 Attended needle-sort card orientation, Sand Lake
NWR Hubert
- 6/15 Met with Ralph Town and Merrill Hammond re. cover
width study, Benson Hubert and Womble
- 6/26 Attended needle-sort card orientation, Fergus Falls
Hubert and Womble
- 6/28 Contacted FFA Youth in Pope County with Wojahn of
MCD re. mallard raising. Hubert
- 6/28 Met with George Swanson of NPWRC re. 3M Co. pesti-
cide experiment, Benson Hubert
- 7/11 Conducted tour of wetlands, both State and Federal,
for Salyer, Smith, Rounds, Versall, Schaarf, Spoden,
Chara and Ledin. Hubert
- 7/17 Presented program to Lions Club, Benson
Hubert

8/17 Met with Harold Anderson, State Health Department
re. Ewert Unit Pollution, Mt. Lake Womble

8/18 Conducted brief tour for John Carlson of Sherburne
NWR of wetland units, Benson Hubert

8/19 Directed Willmar National Guard in ditch plugging
on WPA's Womble

October

& Nov. Delivered Refuge Revenue checks to all eleven counties
involved Hubert & Womble

10/25 Met with Cullen of Willmar Voc. School re. vehicle
service Womble

11/12 Presented program to Trinity Lutheran Fellowship,
Benson Hubert

11/15-

11/16 Attended Job Corps orientation at R.O. Womble

11/16 Contacted local press, Soil Conservation Service
and County Auditor re. formation of Watershed District,
Ortonville Hubert

12/13 Met with R. Ebensteiner re. 4-H rest stop, Sauk
Centre Womble

12/20 Met with ASCS re. crop allotments, Morris Hubert

D. Hunting

The acceptance of the wetlands program continues to rise. General comments of hunters checked shows their hearty support. The non-consumptive recreationalists are also voicing their support. Hunting use was typically high the opening weekend of the waterfowl season. Attempts are being made to record cars, hunters and observations, but analysis of the data is difficult because of bias in data collecting.

The table following summarizes the bag checks during the regular season held October 7th through November 15th. Shooting hours were from one-half hour before sunrise to sunset. Hunting activity sharply declined after the first weekend and an early freeze-up essentially halted the season in the third week of October. Although the ducks-lost category in the table is perhaps worthless because of several biases, it is interesting to note that one hunter reported eight ducks lost one day.

TABLE VII BAG CHECK SUMMARY

Denson Wetland Management District							
	1965		1966		1967		
Hunters checked	32		109		74		
Coot checked	2		0		1		
Ducks checked	44		136		121		
Average Ducks/hunter	1.37		1.24		1.63		
Ducks Lost-Hunters Asked	7/26		13/35		37/48		
Species	No.	%	No.	%	No.	%	
Mallard	1	2	45	33	24	20	
Gadwall	8	18	1	trace	1	trace	
Baldpate	10	23	9	7	6	5	
Pintail	-	-	7	5	1	trace	
G.W. Teal	5	12	18	13	23	19	
B.W. Teal	7	16	22	16	43	40	
Shoveller	-	-	5	4	4	3	
Wood duck	-	-	5	4	11	9	
Redhead	11	25	14	10	2	trace	
Ringneck	-	-	5	4	-	-	
L. Scaup	1	2	5	4	1	trace	
Bufflehead	1	2	-	-	-	-	

E. Violations

All hunters included in the bag check summary were checked for legal compliance. Cooperation from hunters was generally excellent.

TABLE VIII VIOLATION SUMMARY

Defendant	Charge	Officer	Action
Richard M. Grotejohn, Morris	: Overlimit ducks	: Hubert	: \$20/0
Michael J. Hodges, St. Paul	: No license	: Womble	: \$25/0
Jack A. Koplin, Morris	: Overlimit ducks	: Hubert	: \$20/0

All three violations were handled in local court with cooperation from State officers Jim Nelson and Paul Wojahn. Agent Swanson of Fergus Falls reported that a St. Cloud hunter was apprehended by a state officer for shooting a Waterfowl Production Area sign in Stevens County. The case was handled in Federal court resulting in a fine of \$50, a 30-day suspended sentence and one year of probation. Local publicity was solicited on the case.

F. Safety

Formal safety meetings were held periodically. Regular mailings of safety advice and literature from the regional office were reviewed by all personnel. Safety meetings included films and discussions. This station has had no lost-time accidents since its origination in October, 1964.

G. Payments to Counties

Checks were delivered during the fall to the eleven counties within our District. These checks represent returns to counties under the Refuge Revenue Sharing Act, P.L. 88-523. The year 1967 was the second in which the payment was based on either 25% of net refuge receipts or 3/4 of 1% of the adjusted value of Bureau lands within the counties involved. In all cases the latter was larger. Most payments represent a noticeable increase over last year. These funds are designated to be expended for the benefit of both public schools and roads. Funds were derived from refuge system receipts for F.Y. 1967. The following table reflects the counties receiving payments and a comparison of amounts for 1966 and 1967.

County	1966	1967
Big Stone	\$2,905.95	\$3,477.93
Cottonwood	204.54	249.77
Jackson	807.30	1,023.73
Kandiyohi	2,040.73	3,147.17
Lac qui Parle	16.91	673.11
Pope	1,507.43	2,489.97
Stearns	694.73	963.03
Stevens	1,942.47	2,720.86
Swift	1,123.25	1,490.26
Traverse	988.05	1,193.48
Yellow Medicine	20.27	20.27
	<u>\$12,251.63</u>	<u>\$17,449.58</u>

Local publicity has been an important phase of these payments to counties. With the assistance of Area Acquisition officers, we have involved County Auditors and several County Commissioners in the presentation of checks. All county newspapers were contacted and encouraged to publicize these payments. The big point emphasized was that these payments to counties were in lieu of taxes.

The Kandiyohi County newspaper clipping in the appendix is a good example of the type of publicity needed. It is anticipated that these payments combined with local publicity will improve public relations over the District from the standpoint of acquisition and management.

VIII. OTHER ITEMS

A. Items of Interest

Considerable time was spent obtaining certificates of inspection and tenant disclaimers for the Division of Realty.

Needle-sort cards were prepared for about 80 units. Earl Orr, biology instructor at Benson High School, and William Berns worked on this inventory project. Mr. Orr intends to assist again in the summer of 1968.

Duck stamp sales at the Benson Post Office have shown an annual increase since 1963. Totals before that date were not obtained.

TABLE I DUCK STAMP SALES - BENSON, MINNESOTA

Year	AMOUNT	Year	AMOUNT
1963	283	1966	420
1964	293	1967	431
1965	330		

Stamp prices were constant at \$3 through the above period. Although the information is very localized, the outdoor recreation trend in this area is similar to most of the nation. Involved also is the increase in stamp collecting as a hobby.



Mrs. Betty L. Dahl, Clerk-typist
68, 1, 1-12, JJH



Roger H. Nelson and Richard W. Motzko (l,r), Maintenance-
men
68, 2, 1-12, JJH



Jack C. Womble and James J. Hubert, Wetland Managers
68, 3, 1-12, JJH

An incentive award of \$50 was earned by Jim Hubert. The suggestion involved the placement of fences on the interior boundaries only of units that are impractical to graze. This leaves the roadside open for easy hunter access, greater aesthetic value and helps control trespass grazing where neighbors "accidentally" allow cattle in the unit. Without a fence on the roadside, the cattle are free to wander and get lost or stolen. The technique has been very effective and a financial savings.

News releases were issued to all known press and radio outlets in the eleven county district. Included were releases on building sales, a snowmobile ban, and revenue sharing.



Habitat destruction continues at a profit to a few and at the expense of many. 66, 13, 9-28, JJH



Serious soil and water conservation problems exist, but drainage is still emphasized. 66, 1, 4-6, JJH

Sections I, IV, V, and VI of this report were compiled by Jack Womble and Sections II, III, VII, and VIII were prepared by Jim Hubert. The credit for typing goes to Betty Dahl.

B. Signature Page2-7-68
DateJames J. Hubert
James J. Hubert
Project LeaderFEB 9 1968
Date(sgn.) J. H. Dunbar
Signature (R.O. Approval)Acting Asst. Regional Refuge Supv.
Title

3-1758
Form NR-5
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Summit - Two Counties State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water-fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested Acres	Bu./Tons	Unharvested Acres	Bu./Tons			
<u>Cropland Retirement</u>									
Small Grain/Legume	2,292				0		2,300	0	
Small Grain/Legume & Timothy	170				0		170		
<u>Feed Plot Rotation</u>									
Corn	104				55		159		
Bean (Soya)	6				0		6		
Small Grain/Alfalfa	59				0		59		
								Fallow Ag. Land	9

No. of Permittees: Agricultural Operations 91 Haying Operations 0 Grazing Operations 12

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	183	703.0	\$1,406.00	1,199
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				2,694
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

Separate reports shall be furnished for Refuge lands in each county when a refuge is located in more than one county or State.

Cultivated Crops Grown - List all crops planted, grown and harvested on the refuge during the reporting period regardless of purpose. Crops in kind which have been planted by more than one permittee or this Service shall be combined for reporting purposes.

Permittee's Share - Only the number of acres utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. Report all crops harvested in bushels or fractions thereof except such crops as silage, watermelons, cotton, tobacco, and hay, which should be reported in tons or fractions thereof.

Government's Share or Return - Harvested - Show the acreage and number of bushels harvested for the Government of crops produced by permittees or refuge personnel. Unharvested - Show the exact acreage and the estimated number of bushels of grain available for wildlife. If grazing is made available to waterfowl through the planting of grain, cover, green manure, grazing or hay crops, estimate the tonnage of green food produced or utilized and report under Bushels Unharvested column.

Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops - Specify the acreage, kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation - Report total land area devoted to agricultural purposes during the year.

3-1758
Form NR-0
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benness Wetland Management District

County Big Stone

State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
			Acres	Bu./Tons	Acres	Bu./Tons			
<u>Cropland Retirement</u>									
Small Grain/Legume	493				0		493	0	
Small Grain/Legume & Timothy	30				0		30		
<u>Feed Plot Rotations</u>									
Corn	24				12		36		
Small Grain/Alfalfa	27				0		27		
								Fallow Ag. Land	0

No. of Permittees:	Agricultural Operations	14
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No. of Permittees: Agricultural Operations 14 Haying Operations 0 Grazing Operations 0

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	0	0	0	0
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS - HAYING - GRAZING

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Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops - Specify the acreage, kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation - Report total land area devoted to agricultural purposes during the year.

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Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Cottonwood State Minnesota

Heritage Benson Wetland Management District

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
			Acres	Bu./Tons	Acres	Bu./Tons			
<u>Cropland Retirement</u>									
Small Grain/Legume	33				0		33	0	
							</		

No. of Permittees: Agricultural Operations 2 Haying Operations 0 Grazing Operations 1

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	24	30	\$60	48
				2. Other	0	0	0	0
				1. Total Acreage Under Cultivation				33
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

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CULTIVATED CROPS - HAYING - GRAZING

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Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Jackson State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
			Acres	Bu./Tons	Acres	Bu./Tons			
<u>Grassland Retirement</u>									
Small Grain/Legume	87				0		90	0	
<u>Food Plot Rotation</u>									
Corn	18				9		27		
								Fallow Ag. Land	0

No. of Permittees: Agricultural Operations 4 Haying Operations 0 Grazing Operations 1

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	14	70	\$140	112
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				117
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

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Form NR-8
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Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Kandiyohi State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
			Acres	Bu./Tons	Acres	Bu./Tons			
<u>Greenland Retirement</u> Small Grain/Legume	446				0		451	0	
Small Grain/Legume & Timothy	37				0		37		
<u>Food Plot Rotation</u> Corn	18				9		27		
Small Grain/Alfalfa	5				0		5		
								Fallow Ag. Land	0

No. of Permittees: Agricultural Operations 13 Haying Operations 0 Grazing Operations 2

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	33	142.5	\$285.00	235
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				540
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

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Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops - Specify the acreage, kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation - Report total land area devoted to agricultural purposes during the year.

3-1758
Form NR-0
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Lac qui Parle State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
	Acres	Bu./Tons	Acres	Bu./Tons	Acres	Bu./Tons			
<u>Grainland Retirement</u> <u>Small Grain/Legume</u>	81				0		81	0	
								Fallow Ag. Land	0

No. of Permittees: Agricultural Operations 4 Haying Operations 0 Grazing Operations 0

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	0	0	0	0
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

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Government's Share or Return - Harvested - Show the acreage and number of bushels harvested for the Government of crops produced by permittees or refuge personnel. Unharvested - Show the exact acreage and the estimated number of bushels of grain available for wildlife. If grazing is made available to waterfowl through the planting of grain, cover, green manure, grazing or hay crops, estimate the tonnage of green food produced or utilized and report under Bushels Unharvested column.

Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops - Specify the acreage, kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation - Report total land area devoted to agricultural purposes during the year.

3-1758
Form NR-0
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Pope State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
	Acres	Bu./Tons	Acres	Bu./Tons	Acres	Bu./Tons			
<u>Cropland Retirement</u>									
Small Grain/Legume	392				0		392	0	
Small Grain/Legume & Timothy	70				0		70		
<u>Feed Plot Rotation</u>									
Corn	6				3		9		
								Fallow Ag. Land	0

No. of Permittees: Agricultural Operations 14 Haying Operations 0 Grazing Operations 4

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	47	196.5	\$393	349
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				471
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS - HAYING - GRAZING

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Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation - Report total land area devoted to agricultural purposes during the year.

3-1758
Form NR-6
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District

County Stearns

State Minnesota

State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
	Acres	Bu./Tons	Acres	Bu./Tons	Acres	Bu./Tons			
<u>Greenland Retirement</u> Small Grain/Legume	91				0		91	0	
								Fallow Ag. Land	0

No. of Permittees: Agricultural Operators

No. of Permittees: Agricultural Operations 5 Haying Operations 0 Grazing Operations 0

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	0	0	0	0
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				91
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS - HAYING - GRAZING

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Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation - Report total land area devoted to agricultural purposes during the year.

3-1758
Form NR-0
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Stevens State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
	Acres	Bu./Tons	Acres	Bu./Tons	Acres	Bu./Tons			
<u>Cropland Retirement</u>									
Small Grain/Legume	493				0		493	0	
Small Grain/Legume & Timothy	13				0		13		
<u>Feed Plot Rotation</u>									
Corn	13				9		21		
Beans	6				0		6		
Small Grain/Alfalfa	18				0		18	Fallow Ag. Land	0

No. of Permittees: Agricultural Operations 28 Haying Operations 0 Grazing Operations 1

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	21	80	\$160	128
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS - HAYING - GRAZING

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Total Refuge Acreage Under Cultivation - Report total land area devoted to agricultural purposes during the year.

3-1758
Form NR-6
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Swift State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
			Acres	Bu./Tons	Acres	Bu./Tons			
<u>Greenland Retirement</u>									
Small Grain/Legume	32				0		32	0	
<u>Feed Plot Rotation</u>									
Corn	14				7		21		
								Fallow Ag. Land	0

No. of Permittees: Agricultural Operations 2 Haying Operations 0 Grazing Operations 3

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	50	184	\$368	327
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				53
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS - HAYING - GRAZING

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3-1758
Form NR-0
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Traverse State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
	Acres	Bu./Tons	Acres	Bu./Tons	Acres	Bu./Tons			
<u>Cropland Retirement</u>									
Small Grain/Legume	144				0		144	0	
<u>Feed Plot Rotation</u>									
Corn	12				6		18		
Small Grain/Alfalfa	9				0		9		
								Fallow Ag. Land	9

No. of Permittees: Agricultural Operations 3 Haying Operations 0 Grazing Operations 0

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	0	0	0	0
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				171
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS - HAYING - GRAZING

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Total Refuge Acreage Under Cultivation - Report total land area devoted to agricultural purposes during the year.

3-1979 (NR-12)
(9/63)

Bureau of Sport Fisheries and Wildlife

ANNUAL REPORT OF PESTICIDE APPLICATION

Refuge

Benson Wetland Manager District

Proposal Number

1, 2 & 3

Reporting Year

1967

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
June, 1967	Canada & Sow Thistle	Barry Lake, B.S. Co.	1.5	2, 4-D Amine	6 Pounds	4#/Acre	Water	Hand spray
" "	" " " "	Artichoke Lake, " "	1.5	2, 4-D Amine	6 Pounds	4#/Acre	Water	" "
" "	" " " "	Lindgren Lake, " "	.5	2, 4-D Amine	2 Pounds	4#/Acre	Water	" "
" "	Leafy Spurge	Thompson, " "	1.0	Tordon	2 Pounds	2#/Acre	Water	" "
" "	Canada Thistle	Randall, Kandiyohi	1.0	2, 4-D Amine	4 Pounds	4#/Acre	Water	" "
" "	Canada Thistle	Flann, Kandiyohi Co.	5.0	2, 4-D Amine	20 Pounds	4#/Acre	Water	" "
" "	Canada Thistle	Olson Lake, " "	1.0	2, 4-D Amine	4 Pounds	4#/Acre	Water	" "
" "	Canada Thistle	Freese, " "	1.5	2, 4-D Amine	6 Pounds	4#/Acre	Water	" "
July, 1967	Leafy Spurge	Sherstad, Stev. Co.	3.0	Tordon	6 Pounds	2#/Acre	Water	" "
" "	" "	Lang, Swift Co.	3.0	Tordon	6 Pounds	2#/Acre	Water	" "
" "	Canada Thistle	Westhausen, Swift Co.	2.0	2, 4-D Amine	8 Pounds	4#/Acre	Water	" "
" "	" "	Swenson, Swift Co.	.5	2, 4-D Amine	2 Pounds	4#/Acre	Water	" "
" "	Sow Thistle	Sver, Swift County	2.0	2, 4-D Amine	8 Pounds	4#/Acre	Water	" "
" "	Canada Thistle	Flann, Kandiyohi Co.	100.00	2, 4-D Ester	400 Pounds	4#/Acre	Water	Aerial "
" "	" "	Brosh, Pope Co.	40.0	2, 4-D Ester	160 Pounds	4#/Acre	Water	" "
" "	" "	Bredburg, Pope Co.	50.0	2, 4-D Ester	200 Pounds	4#/Acre	Water	" "
" "	" "	Artichoke Lake, B.S.	42.0	2, 4-D Ester	168 Pounds	4#/Acre	Water	" "
" "	" "	Welker, Swift Co.	14.0	2, 4-D Ester	56 Pounds	4#/Acre	Water	Tractor "
August, 1967	" "	Rasmussen, Jackson Co.	3.0	2, 4-D Amine	12 Pounds	4#/Acre	Water	" "

10. Summary of results (continue on reverse side, if necessary)

Satisfactory results were obtained at least for this year. Further effects will be noted in 1968 especially on the Leafy Spurge stands.